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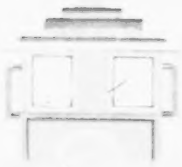
Mortgage Banker

OCTOBER 1980



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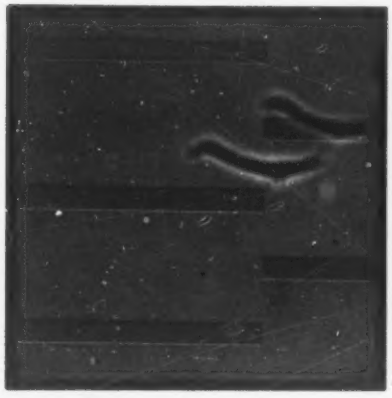

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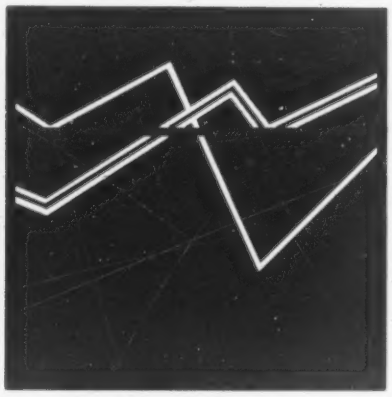

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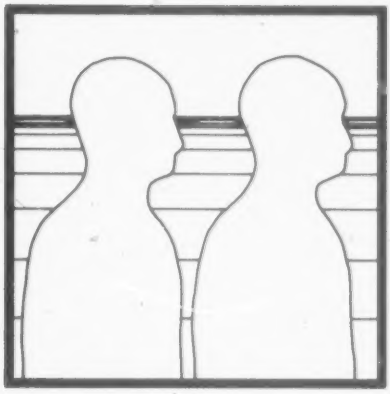

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CAPITAL ADEQUACY and the Mortgage Banker

Schuyler E. Schell

Capital adequacy is of growing concern to mortgage bankers, as well as to permanent investors and other secondary market entities who rely on mortgage bankers' services and solvency. While in the past the vast majority of mortgage bankers have been able to maintain a more than adequate capital position, the likelihood of future vigorous growth, together with persistent economic uncertainty will necessitate the continuous monitoring and reappraisal of a firm's capital requirements and sources.

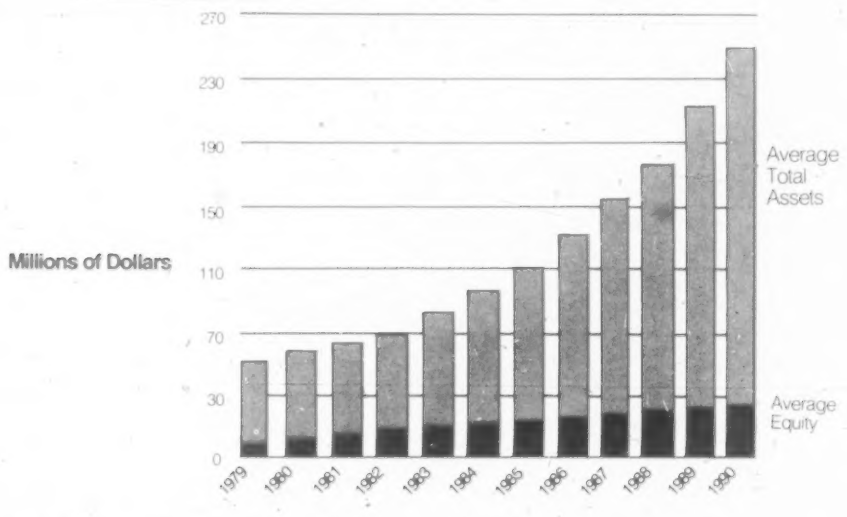
Adequate capital is important to mortgage bankers for a variety of reasons. In the initial start-up of a firm, and in its expansion into new areas and activities, capital is necessary to acquire the phys-

The author is MBA's economist.

Author note: This article is not an exhaustive review of the entire capital adequacy issue. Instead, it is intended to briefly review the issue and pose questions that are best addressed in industry forums, such as the Capital Adequacy Panel at the MBA Annual Convention in San Francisco.

Figure 1

Projected Trends in the Average Mortgage Banking Firm's Asset and Equity Growth[1] 1979–1990



[1]This projection is based on the Average Firm's Asset Growth and Average Leverage Ratio between 1970-1978

ical, as well as the skill base, to compete successfully in a fast-swelling marketplace. During the past decade, and in the coming decade as well, the demand for mortgage credit has and will continue to expand to unprecedented levels. Aggregate annual residential mortgage loan origination volumes increased from $36 billion in 1970 to over $187 billion by 1979; these volumes are expected to more than double in the coming decade. The competition between lenders to capture an ever larger slice of this fast swelling market will be keen in the years to come.

Capital needs in the 1980's

As mortgage bankers continue to grow with the entire mortgage market,[1] their need for capital will also expand markedly. To get a rough idea about the mortgage banker's capital needs in the coming decade, the average firm's total assets and equity are projected in Figure 1. Between 1970 and 1978, the average firm's total assets increased at an average 16.9 percent annual rate. This rate of increase reflects bad years such as 1974–75, when assets actually decreased by 10 percent, as well as good years such as 1977–78, when assets jumped over 25 percent. The growth in assets has been phenomenal, going from $12 million just ten years ago to perhaps $243 million by 1990. To maintain the average leverage factor (the relationship between average assets and average equity), which was 9.63 between 1970 and 1978, the average firm's equity will have to expand markedly in coming years. This equity will have grown from just under $2 million in 1970 to a projected $25 million in 1990.

It is this tremendous growth in the real estate industry in general and mortgage bankers' asset and capital accounts in particular that has to be addressed by all participants in the mortgage banking industry. We must plan now for the remarkable expansion that will be evolving in coming years.

Adequate capital is needed for more than just a firm's start-up and expansion; it is also required as a cushion to absorb losses, enabling mortgage bankers to continue operations in periods of difficulty until a normal level of earnings is restored. Capital also tends to inspire investors' confidence that mortgage bankers will be able to continue their services under adverse conditions.

Even though the mortgage banking industry is on the brink of a very expansive decade, it does not appear that adverse economic conditions are a thing of the past. The second quarter decline in real GNP in 1980, expected to be in the neighborhood of nine percent, bears witness to that fact. Even as the recession with which the 1980's began is eventually replaced by an economic expansion of impressive magnitude, recurring productive capacity limitations, energy crises, and credit crunches, as well as a lingering aura of uncertainty, will make re-emerging adverse economic conditions a distinct possibility.

The industry's strength

In certain respects mortgage bankers weather adverse times much better than their competing financial institutions. In fact, in such times mortgage bankers usually are able to expand their share of the aggregate residential loan market. In terms of the market share of originations, the mortgage bankers' portion has moved inversely with trends in aggregate lending activity. After the 1969 recession, mortgage bankers had about 25 percent of the residential loan market, second only to S&Ls. This share dropped during the boom years of the early 1970's, until the 1974–75 recession when it inched above 20 percent once again. During the ensuing expansion, between 1976 and 1978, this share fell to a low point of 16 percent—well behind S&Ls and even commercial banks. However, in 1979, on the eve of recession, and in response to growing mortgage banker conventional lending activity and some usury impacts, mortgage bankers' share of residential originations was almost 25 percent for the year. This came at a time when all the other major lenders—S&Ls, commercial banks, and mutual savings banks—experienced a decline in their residential market share. While most lenders, in times of tight credit, have seen

[1]Dr. Thomas R. Harter and Schuyler E. Schell, "Mortgage Banking in the 1980's," *Mortgage Banker* (April 1980), p. 29.

Table 1

Assets and Net Worth of Commercial Banks, Savings Associations, Mutual Savings Banks and Mortgage Companies Each December 31, 1969 to 1979

	Commercial Banks			Savings Associations			Mutual Savings Banks			Mortgage Companies		
Year	Total Assets	Total Capital Accounts	Capital to Assets	Total Assets	Net Worth	Net Worth to Assets	Total Assets	General Reserves	Reserves to Assets	Total Assets	Net Worth	Net Worth to Assets
	($ billions)		(percent)	($ billions)		(percent)	($ billions)		(percent)	($ billions)		(percent)
1979	$1,351.0	$105.8	7.8%	$579.3	$32.6	5.6%	$163.4	$11.5	7.0%	$16.4e	$1.9e	11.6%
1978	1,268.6	93.6	7.4	523.5	29.1	5.6	158.2	10.9	6.9	14.6	1.7	11.6
1977	1,166.0	85.8	7.4	459.2	25.2	5.5	147.3	10.0	6.8	13.0	1.5	11.5
1976	1,030.7	78.1	7.5	392.0	22.0	5.6	134.8	9.1	6.7	11.6	1.3	11.5
1975	964.9	69.1	7.2	338.2	19.8	5.8	121.1	8.4	7.0	10.5	1.1	10.7
1974	919.6	63.7	6.9	295.5	18.4	6.2	109.6	8.0	7.3	12.7	1.2	9.9
1973	835.2	58.1	7.0	271.9	17.1	6.3	106.6	7.6	7.1	13.0	1.2	9.2
1972	739.0	52.7	7.1	243.1	15.2	6.3	100.6	7.0	6.9	10.5	1.0	9.9
1971	640.3	47.2	7.4	206.0	13.6	6.6	89.6	6.3	7.1	7.8	0.9	11.5
1970	576.2	43.0	7.5	176.2	12.4	7.0	80.0	5.7	7.2	5.3	0.7	13.7
1969	530.7	40.0	7.5	162.1	11.6	7.2	74.2	5.5	7.5	4.7	0.6	13.7

e: Estimated
Source: Federal Home Loan Bank Board, Federal Reserve Board, Mortgage Bankers Association of America and National Association of Mutual Savings Banks.

their sources of mortgage funds, primarily savings deposits, dissipate through disintermediation, mortgage bankers, through their broad access to the credit market and particularly through their extensive use of the secondary market, have been able to maintain their lending activity.

Compared with these other lenders, mortgage bankers' capital accounts would appear more than adequate; in fact, mortgage companies as a group have a higher capital ratio than those other institutions. This point, which was discussed in depth in the February 1978 *Mortgage Banker*,[2] is worth reiterating. In recent years, the ratio of owner's equity to total assets has been much higher for the mortgage banking industry than for its competition, the depository institutions. Between 1969 and 1979, except for the boom year of 1972 and the inflation-recession years of 1973–74, the mortgage banking industry's capital ratio has been near or above 11 percent. The comparable ratio at the other institutions, on the other hand, usually ranged between 6.5 and 7.5 percent during that 11-year period (see Table 1).

Another point worth reiterating is that the equity figures reported on the mortgage banker's balance sheet do not include an extremely valuable part of their operations: the value of their servicing portfolios of single-family mortgages. This servicing represents a very dependable future stream of income to a mortgage company. However, the value of this servicing is not included on the balance sheet and is, therefore, an unstated equity for the industry.

The precise value of this capital asset is difficult to compute. An imprecise industry rule of thumb states that the value equals one percent of servicing volume. Using this rough measure, the net worth of the mortgage banking industry at year-end 1979 would be increased $1.9 billion. This would boost the equity of the mortgage banking industry from approximately $1.9 billion to $3.8 billion at the end of 1979, which would be nearly 25 percent of industry assets.

Adverse conditions

The mortgage banking industry's strength relative to its competitors under adverse conditions does not mean that it is without problems. On the contrary, under such conditions mortgage bankers are often placed in a definite earnings squeeze. This is particularly true during credit crunches, when fast-rising interest rates wreak havoc with mortgage bankers' profitability. Their financing of loan inventories with substantially short-term debt becomes quite a drain during periods of inverted yields (short-term rates above long-term). This is especially true when the FHA/VA interest rate has been suppressed far below the market rate. The 1978 comparative income statement in the MBA publication *Financial Statements and Operating Ratios* illustrates the significant impact of interest income and expenses for the mortgage banker. Interest income in 1978 accounted for 41 percent of the total income generated by the average firm, and interest expense accounted for almost 38 percent of total operating expenses. The income generated by interest is by far the greatest source of the average firm's revenues. In 1978, interest income was 87 percent greater than origination income and 58 percent more than loan administration income. Also, interest expenses accounted for more than 56 percent of the total nonpersonnel expenses of the average mortgage banking firm during 1978. During periods of inverted yield, the negative net income that is generated places a great drain on the mortgage banker. And the mortgage banker's leverage magnifies these problems even further.

The relatively high degree of financial leverage employed by mortgage bankers, while not as great as commercial banks or savings and loan associations, is fairly typical of financial institutions. This relatively high degree of leverage among financial institutions is a major cause of the relatively high degree of fluctuation in the return on equity for such institutions.

Another consequence of adverse economic conditions is a weakening loan demand, and mortgage bankers are subject to wide swings in profitability if and when activity levels fall. Under such

[2] P. E. Kidd and J. M. Wetmore, "Mortgage companies have higher capital ratios than other financial institutions," *Mortgage Banker* (February 1978), p. 60.

THE CONDO OPTION: IS IT RIGHT FOR YOU?

As anyone who has been house hunting can tell you, houses are expensive. They can also be costly and time-consuming to maintain. As a result, many people are turning to condominiums as an affordable alternative. During the last decade, the total number of condo units has increased nearly tenfold, to over 2 million units, and most experts expect the condo trend to continue.

WHAT IS A CONDOMINIUM?

A condominium is a form of ownership in which you own your unit as well as an interest in the common property and community facilities. Condo fees are charged to each owner for the upkeep of the common property and payment of other common expenses. Condos can be any size or style, including apartments, townhouses and even single family homes.

WHO'S BUYING CONDOS?

The list of condo owners includes all kinds of people—single and married, young and elderly, with and without children, suburbanites and city dwellers.

The children of the post-war baby boom, now in their 20s and 30s, are already house hunting in force, or will be soon. With higher house prices and fewer rental units available, many of these people will be looking at condos.

COST AND RESALE VALUE

In 1979, the average price of a condo was about $57,000, compared with about $65,000 for a new single family home. And the resale value of condos has been increasing almost as quickly as the resale value of houses.

FINANCING A CONDO

Financing a condo is like financing a house in most respects. Whether you qualify for a mortgage depends on many factors: your income, your credit history and the prevailing interest rates.

You may have to shop around a little more for condo financing, because not every lender will be interested in making a loan in the condo community where you want to buy. The lender is, in a sense, investing in the whole condominium, not just in your unit, so he must research and evaluate the entire project. It may not be worth the time and expense for only one loan.

OUR ROLE

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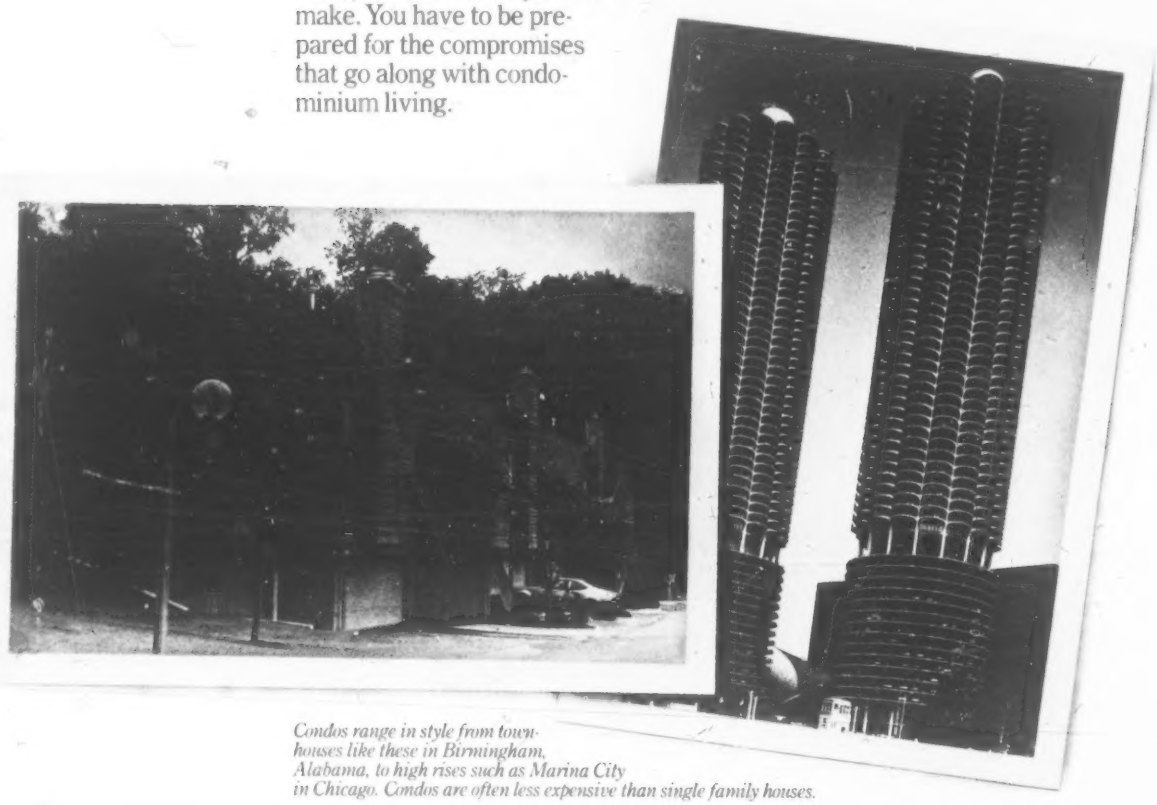
ADVANTAGES AND DISADVANTAGES

Before you buy into a condo, weigh the advantages and disadvantages. Owning a condo unit entitles you to all the tax benefits of homeownership: your mortgage interest payments and property tax can be deducted from your taxable income. And you're relieved of many responsibilities: the condo's management company usually maintains the exterior of the building and grounds.

But remember, condos aren't for everyone. Despite individual ownership of the units, you're only one of many voting members in the condo community. The majority rules on such matters as whether pets are allowed and what alterations you can make. You have to be prepared for the compromises that go along with condominium living.



Condos range in style from townhouses like these in Birmingham, Alabama, to high rises such as Marina City in Chicago. Condos are often less expensive than single family houses.

QUESTIONS WORTH ASKING

Condo ownership can be somewhat more complex than home ownership. So ask a lot of questions about how the condominium is managed, about the builder's reputation, about the quality and condition of the plumbing, electrical and heating systems. Make sure the condo's budget provides an adequate reserve fund for unexpected major expenses (a leaky roof, a bad furnace, etc.).

It is a good idea to have a knowledgeable attorney go over the key legal documents with you. You don't want to be surprised after you've signed on the dotted line.

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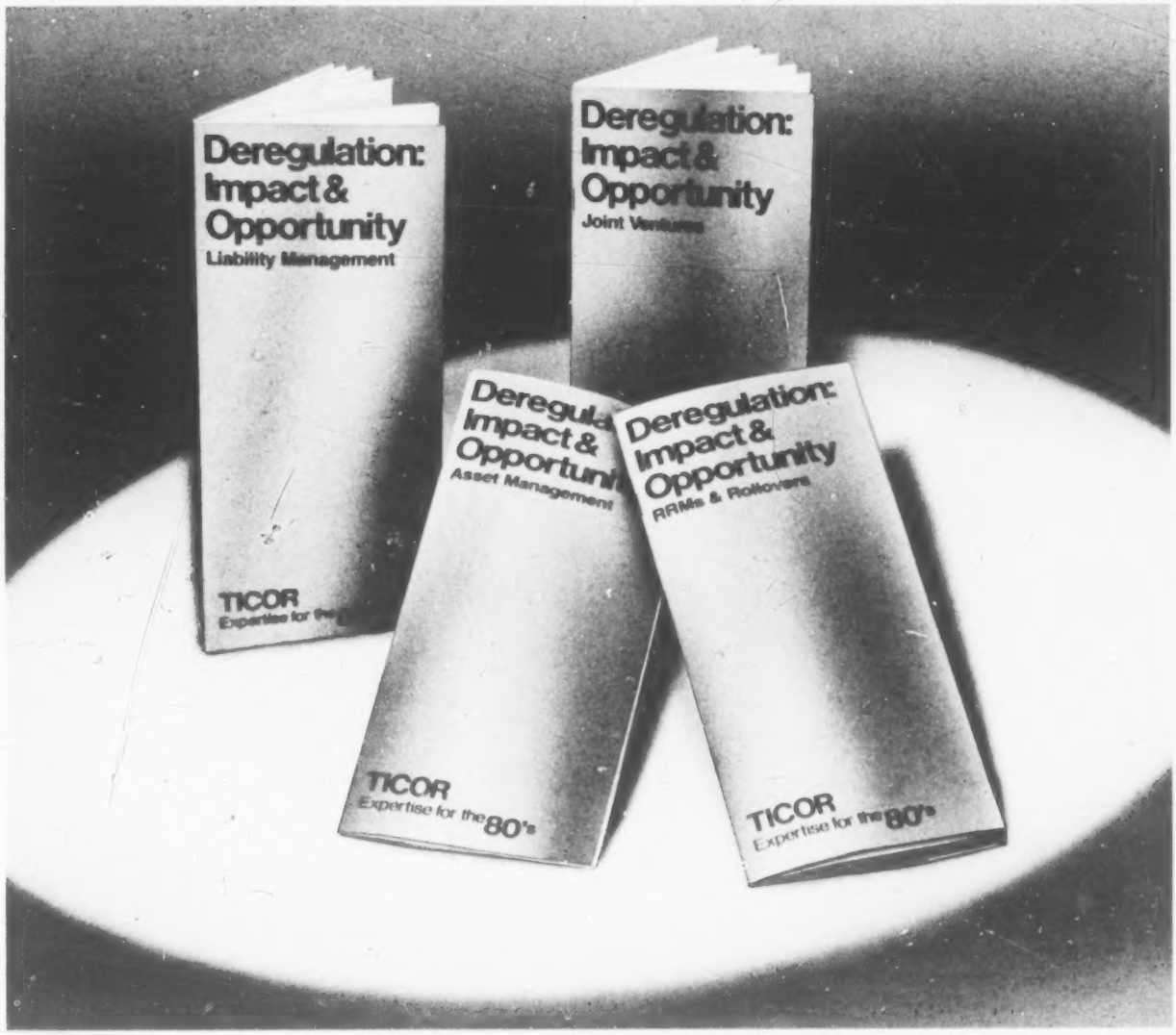

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conditions; concurrent with the decline in activity, the mortgage bankers' financing costs are probably increasing and loan losses growing. Similarly, when interest rates are low, the mortgage bankers' level of activity increases and their financing costs decline. Therefore, the nature of the business is such that the mortgage banker must rely on volume as the principal marketing variable rather than price (servicing and origination fees), because prices are basically administered through FHA and VA, and, hence, are largely uncontrollable.

Under conditions of declining loan demand and, especially, profitability, the primary function of capital is to provide time for the firm to absorb losses. The need to liquidate assets and take losses is of primary importance in the determination of capital adequacy. It is not the loss in asset value alone that calls for adequate capital. Rather, it is the combination of asset losses and liquidity pressures that forces taking losses at a time and in amounts too large for earnings to absorb.

So, mortgage bankers do experience an earnings squeeze under certain adverse conditions, and they definitely need capital to cushion these times; however, the question of capital adequacy for any individual firm can only be answered by that firm and cannot be properly generalized. Every mortgage banking company must determine the necessary level of capital in relation to many diverse elements. Among the more important factors to examine are the following:

1. earning power under adverse conditions
2. liquidity needs under adverse conditions;
3. quality and likely deterioration of quality in the assets held;
4. alternative sources of new capital;
5. owners' aversion to risk of failure; and
6. requirements for participation in various markets, such as FHLMC, FHA, GNMA, and FNMA.

Capital requirements

Regardless of the fact that capital adequacy cannot be properly generalized, regulators have, over the years, mandated a variety of capital requirements for mortgage bankers. The FHA's criteria for a fully-approved mortgagee require sound capital funds properly proportioned to its liabilities of not less than $100,000 invested in assets acceptable to the FHA. In order to retain FHA's approval, the mortgagee must, at all times, maintain a net worth of at least $100,000. These requirements also affect mortgage bankers' dealings with GNMA and FNMA.

Under conditions of declining loan demand and profitability, the primary function of capital is to provide time for the firm to absorb losses.

Recently, these net worth requirements were further elaborated with the FHLMC requirements for HUD-approved mortgagees as eligible sellers. The FHLMC eligibility requirements call for the maintenance of an adjusted net worth that is the greater of $100,000, or the amount calculated as the "Benchmark Net Worth," which mandates different equity ratios by asset risk categories. FHLMC places further constraints on net worth by requiring adjustments or deletions of non-qualifying assets. Another eligibility requirement calls for the potential seller to have a leverage ratio of total assets to adjusted net worth not exceeding 25 to one. To cap off their eligibility requirements, FHLMC also has several liquidity tests.

Another set of net worth and liquidity requirements that will soon concern mortgage bankers relates to the criteria involved in the rating decisions made by Standard and Poors and others in the investment community with regard to mortgage bankers' issuance of mortgage-related financial instruments. Some of the larger mortgage companies have used the collateral trust note (CTN) to access the public market for capital. These notes mature in 270 days or less and are secured by a pool of collateral consisting of mortgage loans. This type of financing is attractive to mortgage bankers because it offers them an alternative to bank borrowing and enables them to take advantage of rate differentials. The size of the mortgage company seeking to issue CTN's is an important consideration in Standard and Poors' rating process.[3] S&P believes that there are a number of serious drawbacks in dealing with smaller companies: a likely lack of geographical diversity or, if not, difficulty in controlling widespread operations. Such considerations as "competitive posture, auditing, controls, planning, and management depth" are thought by S&P unlikely to compare favorably to those of larger firms. Therefore, S&P prefers that a potential issuer have a minimum of $5 million in equity to be considered for an investment grade rating. This preference is, however, qualified by the fact that where small mortgage bankers have the backing of a stronger parent the same rating concerns may not be present. Also, if the notes were issued by a special purpose corporation and backed by a pool of mortgages from several originators, the size of each individual originator could be less important. Mortgage bankers' equity positions will also be rigorously scrutinized as they become more involved in the issuance of conventional mortgage-backed pass-through securities.

Mortgage bankers should ask themselves whether or not they are satisfied with the multitude of net worth and liquidity requirements that are mandated in so many areas of the market. If they are not satisfied, then what changes in regulations, and within mortgage bankers' capital accounts as well, can be made to reach some satisfactory regulatory balance?

In seeking maximum returns, mortgage bankers will minimize capital to gain the greatest leverage in earnings. Permanent investors and other purchasers of the mortgage bankers' wares, on the other hand, desire mortgage bankers to have a maximum amount of capital as a protection against risks; so, while capital adequacy requirements are based on valid concerns, the proliferation of regulations tends to increase costs and decrease profitability. Such regulation has a particularly stifling effect on innovation by increasing the cost involved in any nontraditional technique. New types of operations and the hiring of potentially innovative personnel are expensive propositions involving high start-up costs that should be viewed as investments rather than expenses.

Caveats to capital expansion

In coming years, the mortgage banking industry should expand its capital base through expanded private placements of long-term debt and especially through the greater marketing of equity. Some mortgage bankers have, in effect, accomplished this by affiliation with other institutions. A number of caveats should, however, be considered with respect to the capital base expansion.

The multitude of debt and equity alter-

[3]Standard and Poors, "S&P's Approach to Rating Mortgage Related Financings Issued by the Private Sector," *Fixed Income Investor*, August 26, 1978.

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natives offers a wide mix of options for capital expansion. However, each alternative has its disadvantages as well as its advantages. Mortgage banking firms, in structuring their capital expansion, will have to decide, among other things, how much, if any, control they are willing to yield and how much profit they are willing to share with an expanded group of stockholders.

The financial attractiveness of long-term debt financing lies in the additional leverage provided by such securities. Under adverse conditions, though, a long-term fixed-payment debt instrument works directly opposite to the true function of capital. Under such conditions, mortgage bankers using debentures and notes as capital base will retain the fixed charges imposed by such instruments and, thus, reduce their ability to absorb losses from current earnings. While debt expands the capital base without a concurrent expansion of ownership, the indenture associated with this debt may place a number of constraints on management's future borrowing plans.

The sale of common stock, on the other hand, while not mandating fixed charges like bonds, does diminish the original owner's control. Besides sharing in ownership, common stock also results in the sharing of profits. Nonetheless, without an expanded equity base, there may be nothing left to share.

Of course, there are still more alternatives: preferred stock, while lacking the tax benefits (interest expense deduction) of debt and while often requiring a higher yield than comparable bonds (to compensate for the fact that dividends, while they may be cumulative, are not mandated) will avoid the obligation of fixed payments during adverse business conditions. Such stock usually also avoids both participation in earnings beyond the fixed dividend, and, perhaps most importantly to some mortgage bankers, avoids the loss of control by lacking or seriously limiting voting rights. And so, depending on the present owners' aversion to sharing both control and profits, the higher costs associated with preferred stock relative to many other capital sources may be well worth it.

Mortgage bankers, where they are able, should carefully consider and utilize the many diverse forms of debt and equity alternatives in seeking to expand their capital base, while at the same time attempting to minimize their overall cost of capital. In so doing, they should also be able to strike a balance between the expansion of their capital base and the dilution of both control and profits occasioned by an expanded ownership base.

In further exploring and defining the capital adequacy issue, mortgage bankers should consider:

1. What are appropriate ways to measure capital adequacy for the diverse mortgage banking industry?
2. Are the capital requirements for participation in various markets, such as FHLMC, FHA, GNMA, and FNMA reasonable?
3. How can mortgage bankers best expand their capital base, and at the same time minimize the loss of management control?
4. What effect will capital adequacy have on mortgage bankers' expansion into ancillary activities such as joint-ventures?

The Capital Adequacy Subcommittee of MBA's Long-Range Planning Committee will present a panel on these issues at the October Annual Convention. It is hoped that many of the questions raised in this article and by the panel will soon be addressed and answered by the mortgage banking industry. Only by answering these questions can the mortgage banking industry expect to maintain its presently adequate capital position in the years to come. □

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The Historical Performance of Mortgage Securities: 1972-1980

Michael Waldman and Steven P. Baum

The tremendous growth of mortgage pass through securities in the 1970's, and their acceptance as an investment vehicle by not only thrift institutions but also by a wide variety of institutional investors, led Salomon Brothers to introduce a total rate-of-return index for these securities in March 1979.[1] This Index allowed investors to compare the performance of mortgage pass throughs with alternative fixed income investments and to compare the performance of their pass through portfolios with the "market average" return.

Initially, the Index covered periods beginning with January 1, 1978. However, the Index has recently been back-dated to cover periods beginning with January 1, 1972, for GNMA pass throughs, and January 1, 1977, for FHLMC PC's. The start date for conventional pass throughs remains January 1, 1978.

The purpose of this article is to present the results of the back-dated Index, and to analyze these results over the various market cycles between 1972 and the present. Comparisons are then made between the Mortgage Index and the Salomon Brothers High-Grade Corporate Bond Index, as well as long and 10-year Treasury securities. Finally, some of the relative performance differences within the mortgage pass through market are discussed.

The results show that the mortgages outperformed the three alternative investments: corporate bonds by 15.3 percent over the period January 1972 through March 1980; long Treasuries by 21.7 percent over the period September 1974 through March 1980; and 10-year Treasuries by 2.4 percent over the period January 1977 through March 1980.[2] The main reasons for this return advantage of the mortgage pass throughs are their shorter maturity (versus the corporates and long Treasuries) during a period of generally rising rates, and their higher yield (versus both the long and 10-year Treasuries), especially when the full value of prepayments for discount pass throughs is taken into account.

The back-dated mortgage pass through index

The Mortgage Index covers single family GNMA, FHLMC, and conventional mortgage pools. The total return of the Mortgage Index is made up of three parts: principal return, interest return, and reinvestment return. The principal return component is further divided into price move and the return resulting from the principal paydown (including any prepayments). Since prepayments on mortgages are statistically uncertain, Salomon Brothers maintains a data base of monthly paydowns on all mortgage pass throughs. Thus, the paydown return over any holding period reflects the actual principal payments on all pools covered by the Index. Reinvestment is "back into the market;" i.e., each month's payment of principal and interest is reinvested into the pass through market in amounts weighted by the overall composition of the market that month. For a detailed discussion of the scope and methodology of the Index, see "Introducing the Salomon Brothers Total Rate-of-Return Index for Mortgage Pass Through Securities."

The dimensions of the back-dated Index are shown in Table 1. The Index currently covers about 28,000 pools, representing approximately $90 billion in original face amount. (This is about 90 percent of the total of all outstanding mortgage pass through pools—the difference arises in large part because the Index does not cover "odd coupon" pass throughs for which there are no regularly available price quotes or non-single family pass throughs.)

The Index now covers GNMA's from the beginning of calendar year 1972. Since paydown figures for GNMA's were not available until March 1972, it was assumed that the paydowns for January and February of that year were at the same rate as in March. With this exception, the Mortgage Index is based entirely on historical paydowns, prices, and market compositions. FHLMC PC's are first included in the Index in January

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[1] Michael Waldman, Introducing the Salomon Brothers Total Rate-of-Return Index for Mortgage Pass Through Securities, Salomon Brothers, March 15, 1979.

[2] The reason for the shorter comparison periods versus the Treasuries is the lack of comparable Treasury issues during the first part of the 1970's.

1977, when FHLMC first started using a dealer network to distribute its PC's, thus generating an active secondary market in these securities. The first conventional (corporate) pass throughs were issued in the fall of 1977; the Index picks them up at the start of 1978.

Analysis of the results

A natural starting point for comparisons with the Mortgage Index is the Salomon Brothers High-Grade Corporate Bond Index, an index similar to the Mortgage Index, covering long-term AAA and AA utility and industrial bonds. For the period from January 1972 through March 1980, the Mortgage Index shows a net advantage in total return of 15.3 percent over the High-Grade Corporate Bond Index (Table 2 and Figure 1). Almost all of this advantage accrued during the market decline years of 1973–1974 and 1978–1980 (through the first quarter of 1980). On the other hand, the Bond Index significantly outperformed the Mortgage Index during the rally years of 1975–1976.

That the Mortgage Index should enjoy an overall advantage during this period is not surprising: the Bond Index represents an average maturity of approximately 25 years, while mortgage pass throughs are traded to a 12-year average life. Thus, one would expect the (shorter) Mortgage Index to do better during the significant secular upward trend in interest rates of the past eight years. Figure 2 shows the cumulative value of the two Indexes (January 1, 1972 = 100). Here, one can clearly see the Mortgage Index gaining its advantage during the bear bond market of 1973–1974—an advantage that it maintains to the present—although it was somewhat narrowed in the 1975–1976 rally.

The performance characteristics of mortgage pass throughs relative to other fixed income investments can be seen even more clearly when one breaks the period under consideration into market cycles. Table 3 and Figure 3 give the rates-of-return for long Treasury and 10-year Treasury securities, as well as for the Mortgage and Corporate Bond Indexes, for six cycles: a decline from January 1972 through the peak in rates in September 1974, a six-month rally to March 1975, a seven-month decline to a peak in rates in October 1975, a 15-month rally to January 1977, and finally the long rise in interest rates through March 1980, which is itself broken into the periods before and after the Fed initiatives of October 6, 1979.

The long Treasuries first are analyzed

Table 1. **Dimensions of Salomon Brothers Mortgage Pass Through Index.**
Amount Issued in Billions of Dollars

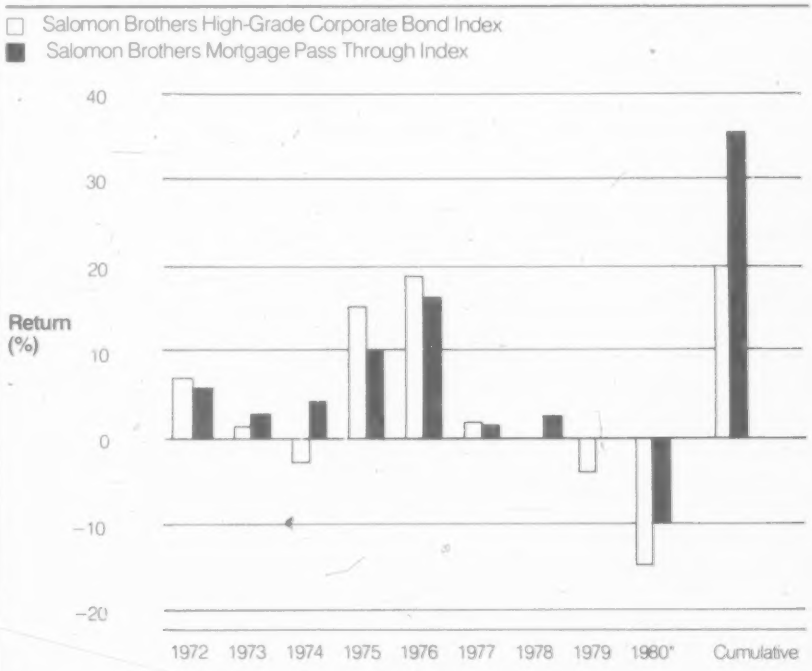
January 1	GNMA	FHLMC	Conv.
1972	$2.6		
1973	4.0		
1974	6.2		
1975	9.5		
1976	16.7		
1977	27.2	$0.5	
1978	46.6	5.5	$0.2
1979	59.6	11.1	1.0
1980	69.3	15.0	1.4

Table 2. **Historical Returns Over Calendar Years**

	SB H-G Corporate Bond Index	SB Mortgage Pass-Through Index	Advant. of Mort. Index
1972	7.26%	6.13%	−1.13%
1973	1.14	2.55	1.41
1974	−3.04	3.85	6.89
1975	14.64	10.39	−4.25
1976	18.64	16.32	−2.32
1977	1.70	1.56	−0.14
1978	−0.10	2.39	2.49
1979	−4.18	0.15	4.33
Jan–Mar 80	−13.52	−10.17	3.35
Entire Period[a]	20.47%	35.77%	15.30%

[a]All returns result from compounding monthly returns; nonannualized

Figure 1. **Historical Returns Over Calendar Years**



*1980 returns are for the first quarter

for the rally period starting in September 1974, shortly after the issuance of the Treasury 8½s of May 15, 1999. The analysis of 10-year Treasuries starts with the cycle beginning in January 1977, about half a year after the 7⅞ percent notes of May 15, 1986, were issued.

This overall comparison reveals two interesting points. First, the Corporate Bond Index outperformed the long Treasuries over each of these cycles with the exception of the most recent decline (October 1979–March 1980) where the two were approximately equal. Second, the positive returns of the 1975–1976 rally considerably outweigh the negative returns of the unprecedented market decline that ended last March. This observation (together with the bull bond market of April–June) perhaps provides some perspective on the traumas recently suffered by fixed-income investors.

Comparison versus treasury market

Let us focus now on the comparison between mortgage pass throughs and long Treasury securities in the period September 1974 through March 1980 (Table 4 and Figure 4). Over this 5½-year period, the mortgage pass throughs provided a substantial net 22 percent greater total return. Again, the mortgage securities were ahead in all the market decline cycles, as would be expected given their much shorter average maturity. However, the pass throughs also outperformed the long Treasuries in the 1974–1975 rally by a considerable 4.57 percent. How is this explained?

The answer is that there are two important factors determining the relative performance of these securities, other than their maturity differences. One is that the mortgages provide a "yield cushion" over the Treasuries, both in quoted yield (and more appropriately for comparisons, its bond equivalent), and even more so when the actual prepayment characteristics (i.e., cash flows) of the pass throughs in this period are used as the basis for yield calculations. Mortgage pass through pools have traditionally been quoted to a 12-year prepayment, an assumption that usually has proved too conservative over the past decade. These faster prepayments provide a considerable "yield kicker" over the quoted yield for pass throughs trading at a discount, thereby widening their yield advantage over the Treasuries beyond that which is apparent when simply comparing market quoted yields.[3]

[3]See Michael Waldman, The Value of GNMA Discounts, Salomon Brothers, March 6, 1980.

Figure 2. **Comparative Rate of Return Indexes**
January 1972–March 1980

Figure 3. **Historical Returns Over Market Cycles**

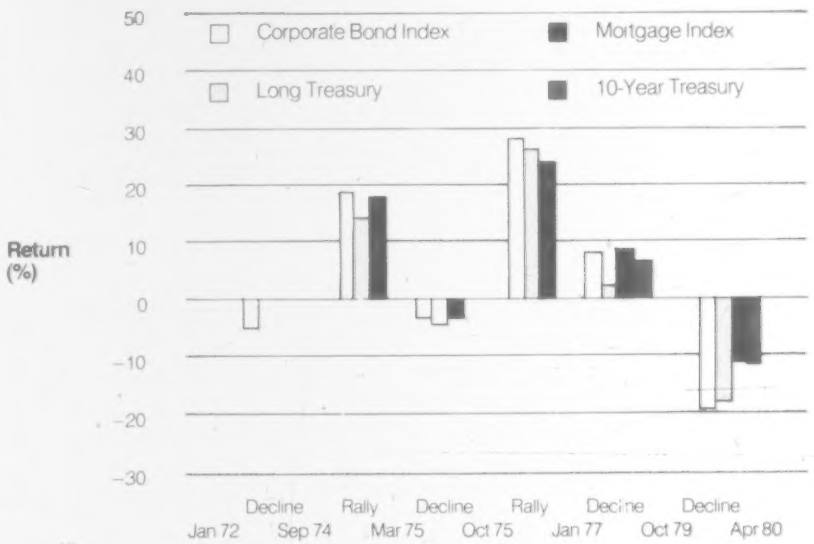


Table 3. **Historical Returns Over Market Cycles**

Beg. of Month		Corp. Bond Index	Long Treas.	10-Year Treas.	Mort. Index
Jan 72–Sep 74	**Decline**	−5.41			−0.05
Sep 74–Mar 75	**Rally**	19.45	14.23		18.80
Mar 75–Oct 75	**Decline**	−2.28	−3.17		−2.64
Oct 75–Jan 77	**Rally**	29.58	26.56		25.54
Jan 77–Oct 79	**Decline**	5.69	1.08	4.32	6.92
Oct 79–Apr 80	**Decline**	−20.34	−19.34	−12.63	−12.50
Overall 8.25 Years		20.47			35.77

The other main factor influencing the return of the pass throughs vis-a-vis the long Treasuries is the changing relationship of the yield spread between these two instruments (Table 5). This largely accounted for the surprisingly strong showing of the Mortgage Index during the September 1974–March 1975 rally. For this period, the yield spread of the pass throughs (as represented by GNMA 9's) over the Treasuries narrowed from approximately 119 basis points to 55 basis points. This narrowing, combined with the pass throughs' natural yield cushion, more than overcame the greater positive price volatility of the longer Treasuries in a rally. Spreads then remained relatively stable until the beginning of 1977. Predictably, the mortgages did better in the two declines in this period; the Treasuries did better in the late 1975–1976 rally. In 1977, the spreads widened to somewhat over 100 basis points again, but the magnitude of the general market decline (again together with the "yield cushion") more than offset the effect of the widening spread, and still left the pass throughs well ahead in return.[4]

Comparison versus 10-year treasuries

Turning our attention to the 10-year Treasuries, we see that over the last two market decline cycles from January 1977 through March 1980, the Mortgage Index has a net return advantage of 2.40 percent (Table 6 and Figure 5). This may be a little unexpected, in view of the fact that the mortgages are traded to a 12-year life, and, in this sense, represent a slightly longer investment than the 10-year Treasuries. However, the sizable yield advantage of the mortgage securities and a slight narrowing in the spread between mortgage investments (again represented by GNMA 9's) and the Treasuries (Table 5) once more predominate, and the pass throughs provide a higher total return.

April–June 1980 rally

Finally, although it is still too early to carry out any post-mortems on the bond market rally that began in April, it is interesting to look at the April–June returns for our four market sectors (see Table 7 and Figure 6). During the precipitous interest rate drop in April, the yield spreads between mortgage securities and high-

[4]For a more detailed look at how changing spread relationships can affect values in the mortgage pass through market, see Martin L. Leibowitz and Michael Waldman, A Constructive View of GNMAs, Salomon Brothers, October 16, 1979.

Table 4. **Historical Returns Over Market Cycles—** Long Treasuries versus Mortgage Securities

Beg. of Month		Long Treas.	Mort. Index	Advant. of Mort. Index
Sep 74–Mar 75	Rally	14.23	18.80	4.57
Mar 75–Oct 75	Decline	−3.17	−2.63	0.54
Oct 75–Jan 77	Rally	26.56	25.54	−1.02
Jan 77–Oct 79	Decline	1.08	6.92	5.84
Oct 79–Apr 80	Decline	−19.34	−12.50	6.84
Overall				
5.6 Years		14.14	35.84	21.70

Figure 4. **Historical Returns Over Market Cycles—** Long Treasuries versus Mortgage Securities

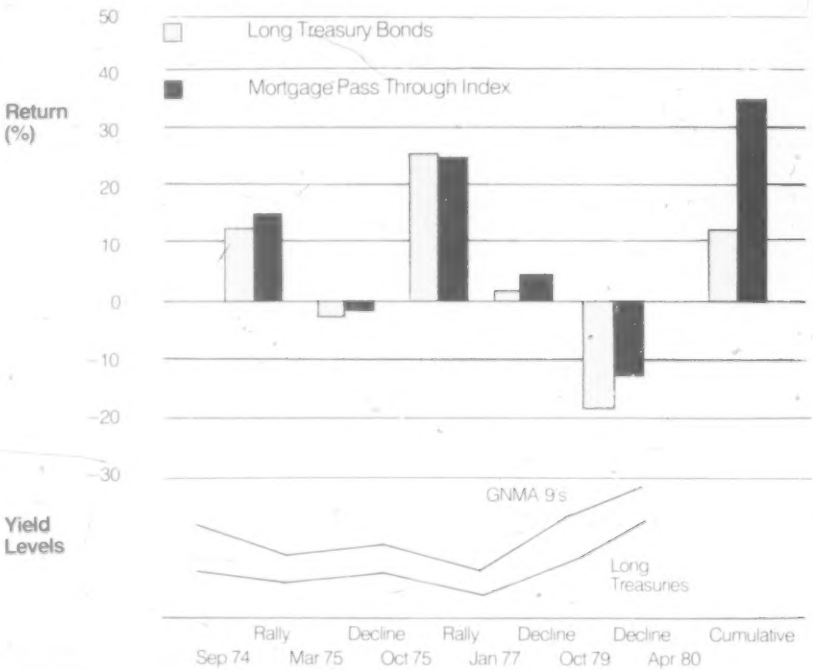
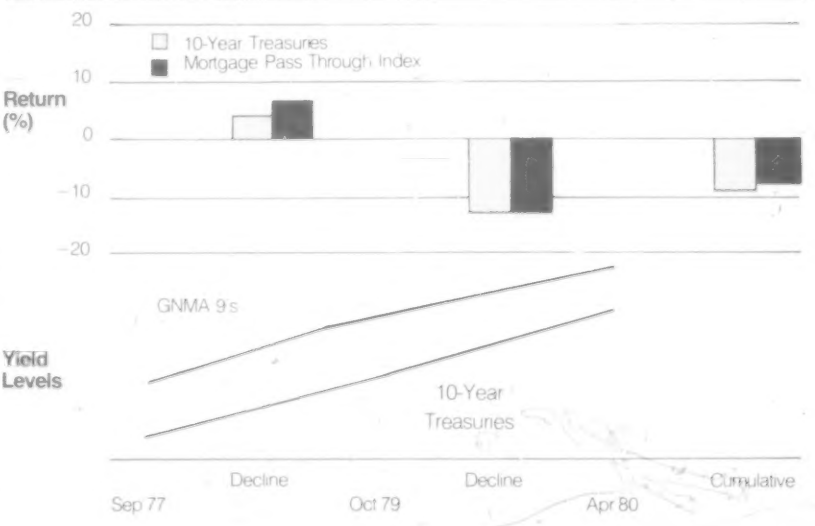


Figure 5. **Historical Returns Over Market Cycles—** 10-Year Treasuries versus Mortgage Securities



grade bond investments narrowed dramatically. For example, the yield spread between long Treasuries and GNMA 9's collapsed from 113 basis points at the end of March to 41 basis points at the end of April. As a result, mortgage securities (15.06 percent) outperformed both high-grade corporate bonds (14.19 percent) and long Treasuries (13.00 percent) for the month of April.

This pattern was reminiscent of a similar outcome in the October 1974-March 1975 rally. In both of these periods, yield spreads widened in the last stage of the market decline and then snapped down as recession took hold and interest rates fell. Several factors common to both periods contributed to the narrowing in spreads. The yield curve returned to a positive slope, improving the relative position of intermediate issues vis-a-vis longer securities in general. Mortgage supply dried up in a depressed housing market. At the same time, Treasury financing needs increased, and the corporate bond calendar greatly expanded as a result of the lower level of rates. Finally, in both periods, thrift institutions re-entered the market as buyers of mortgage securities when their savings flows shifted from negative to positive.

Under the continuing decline in interest rates in May and part of June, the higher volatility of the long bonds, along with a widening in the yield spread, resulted in the long bond market instruments outperforming mortgage securities for these months. Overall, for the second-quarter period, high-grade corporate bonds had the highest return (25.05 percent), followed by long Treasury securities (24.80 percent), mortgage securities (22.15 percent), and 10-year Treasuries (18.99 percent).

Performance within the mortgage securities market

In general, the returns of the individual mortgage securities have followed the overall mortgage market returns. However, there have been significant relative performance differences within the market. Table 8 outlines the calendar year performance record for the three mortgage security categories (GNMA's, FHLMC's, and conventional pass throughs) and for selected coupon sectors. Particular comparisons over various periods are highlighted in Table 9.

As GNMA 9's traded at premium prices in the 1976 rally, they became less attractive to many investors because of the potential losses on prepayments. As a result, prices on 9's rose less than those on the discount GNMA's—they "stalled out" in the rally. The yield spread versus 7½s widened to 45 basis points at the end of the year, and the 9's underperformed the 7½s by 3.36 percent in total return.

As rates increased in the second half of 1977, the 9's traded closer to par, the yield spread reverted back to a narrower 10 basis points and the 9's outperformed the 7½s for calendar 1977.

GNMA 9's performed well in the first half of 1978 but deteriorated later in the year. (Overall, the return on 9's was 1.87 percent lower than on 7½s.) A large supply of the 9's became available following the FHA/VA rate change in June 1978, which made the 9's the GNMA current coupon. At the same time, investor interest shifted toward the lower coupons because of a heightened awareness of the value of fast principal paydowns, together with a fear of sluggish performance for the 9's (then the highest GNMA coupon) in a possible rally. Demand for the discounts also derived from standby contracts coming due.

A dealer group was established to distribute and trade FHLMC PC's in January 1977. Over the following two years, FHLMC's outperformed GNMA's, as shown by the yield spread from GNMA 8's to FHLMC 8's which narrowed in 1977 and then turned negative in 1978 (see Table 10). These yield spread improvements relate primarily to the relationship between the discount sectors

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rather than the current coupons. A key factor in this development was the recognition of fast FHLMC paydowns, which implied higher yields on discount PC's than represented by the standard yield to 12-year life. This perception tended to raise the prices of discount PC's relative both to GNMA's and current coupon PC's. Also contributing to the strong FHLMC performance over this period were an increase in the FHLMC investor base as the security became more familiar to nontraditional mortgage investors, and a limited supply of discount PC's which were free to trade because of loss constraints on certain institutional holders (primarily thrifts) of these securities.

In the market decline in the first quarter of 1980, the FHLMC current coupon 12½s outperformed discount FHLMC's, for example the 8½s, by more than 4 percent (see Table 11).

Two factors contributed to this strong performance. First, principal paydowns fell to low levels in the depressed housing market, thus reducing the attractiveness of the discounts. Second, the high level of rates attracted certain buyers who focused on the highest yielding current coupon issues. At the same time, the volume of FHLMC's created was extremely low, resulting in a scarcity of the current coupon issue and in some cases problems in covering shorts.

As the market rallied in April and May, total return investors shifted support to the discounts in the belief that the lower coupon issues would show better price performance (see Table 12). The perception was that issues priced over par would stall out in a rally (as in 1976) because of potential losses on prepayments. Subsequently, the discounts did move further up in price than the high coupon issues. For example, FHLMC 8½s outperformed FHLMC 12½s by 6.0 percent in total return. The yield spread between these issues widened by 67 basis points.

The same factors applied in the GNMA market, where the 9's outperformed the 12½s by 5.7 percent. In the earlier part of the rally in April and May, the situation was moderated by a certain amount of demand for the GNMA high coupon issues. Mortgage bankers bought these issues when they could not create enough loans to cover prior sales. Also, high-coupon GNMA's were used to deliver against futures contracts on the Chicago Board of Trade.

Conclusion

The historical studies of mortgage se-

Figure 6. **Historical Returns for Spring 1980 Rally**

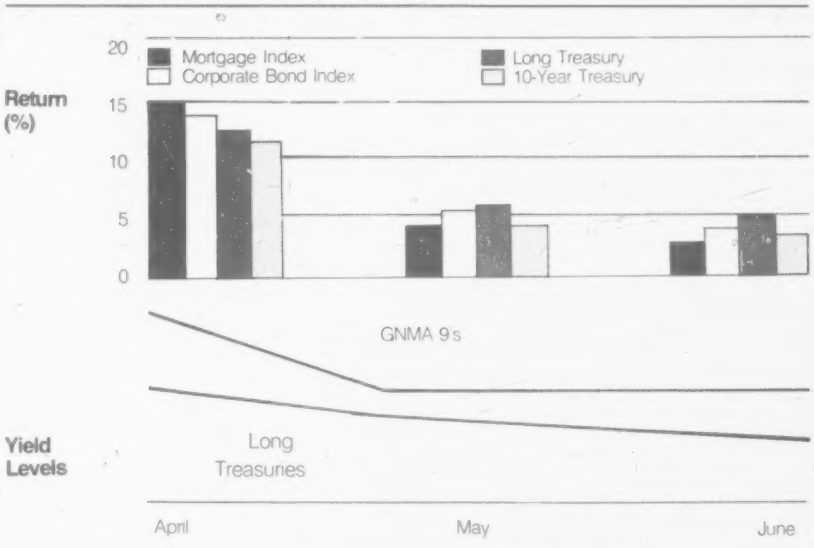


Table 5. **Changing Yield Spread Relationships**
Treasuries versus Mortgage Securities

Beg. of Month	Long Treasuries Yield	10-Year Treasuries Yield	GNMA 9's Yield[a]	Basis Point Spread Off Long Treasuries	Basis Point Spread Off 10-Year Treasuries
Sep 74	8.70		9.89	119	
Mar 75	7.83		8.38	55	
Oct 75	8.55		9.13	58	
Jan 77	7.30	6.79	7.86	56	107
Oct 79	9.23	9.42	10.49	126	107
Apr 80	12.27	12.60	13.40	113	80

[a]Mortgage yield to a 12-year life.

Table 6. **Historical Returns Over Market Cycles —**
10-Year Treasuries versus Mortgage Securities

Beg. of Month		10-Year Treas.	Mort. Index	Advant. of Mort. Index
Jan 77–Oct 79	Decline	4.32	6.92	2.60
Oct 79–Apr 80	Decline	−12.63	−12.50	0.13
Overall				
3.25 Years		−8.85	−6.45	2.40

Table 7. **Total Return and Yield Spread**
April–June 1980

	Total Return					
	Mort. Index	Corp. Bond Index	Long Treas.	10-Year Treas.	Month-End Long Treas. Yield Level	Month-End Yield Spread GNMA 9's Off Long Treas.
March					12.27	113
April	15.06	14.19	13.00	11.96	10.87	41
May	4.21	5.58	5.72	4.10	10.33	56
June	1.87	3.72	4.46	2.09	9.94	82
Total April–June	22.15	25.05	24.80	18.99		

Table 8. **Returns for Selected Sectors**

	GNMA							FHLMC PC					
	6½	7½	8	9	11	12½	All	8	8½	10	12½	All	Conv.
1972	6.63		5.98				6.13						
1973	2.15		3.27				2.55						
1974	3.99		4.09				3.85						
1975	10.38		10.18	11.34			10.39						
1976	18.42	17.86	15.91	14.50			16.32						
1977	1.12	0.25	1.76	2.71			1.53	2.90				2.93	
1978	2.29	2.43	2.20	0.56			2.19	5.12	3.39			3.97	1.60
1979	2.17	−0.14	0.12	0.21			0.18	−1.18	−0.17	0.41		0.06	0.62
Jan–Mar 80	−10.38	−10.37	−10.30	−10.24	−9.69		−10.34	−9.99	−9.93	−9.02	−5.77	−9.33	−10.86
Apr–Jun 80	25.48	21.53	23.73	21.86	20.10	16.12	22.38	22.32	21.76	20.00	15.79	20.74	23.13

curity returns put their past performance record into perspective and provide some insight into the investment characteristics of these instruments. Overall, the mortgages have outperformed each of the other sectors examined (high-grade corporate bonds, long Treasuries, and 10-year Treasuries). As we have seen, the main reasons for this are the shorter average maturity of the mortgages during a period of generally rising rates and the high relative yield levels of the mortgages. Pass through returns were also helped by some narrowing in the yield spread relationships vis-a-vis both the long and 10-year Treasury issues.

In past market rallies, pass throughs have shown surprising strength versus longer issues. For instance, narrowing spreads and the "yield cushion" enabled pass throughs to outperform long Treasuries in both the September 1974-March 1975 rally, and in the initial sharp drop in interest rates in April 1980. On the other hand, in the absence of an offsetting narrowing in yield spreads, greater price volatility produced advantages for the longer issues in the October 1975-January 1977 rally and in May-June 1980.

Within the market, the key factors affecting relative performance in the past have been: the supply and liquidity of the specific issues or sectors, the preference by total return investors for discounts in a rising market and by thrift institutions for current coupon issues. The changing perception of the value of prepayments has also had an effect.

In summary, the yield advantage of mortgage securities provides return benefits over the course of time. These investments offer particular advantages in a rising interest rate environment. In market rallies, long bonds have the advantage of greater price volatility for a given yield move. But mortgage securities may still provide favorable relative performance if yield spreads narrow sufficiently. □

Table 9 **GNMA 7½s versus 9's: 1976-1978**

	Total Return			Yield Spread Relationship			
	GNMA 7½	GNMA 9	Advant. of 7½s	1st of Month	GNMA 7½ Yield	GNMA 9 Yield	Basis Point Spread
				Jan 76	8.53%	8.60%	7
1976	17.86%	14.50%	+3.36%				
				Jan 77	7.41	7.86	45
1977	0.25	2.71	−2.46				
				Jan 78	8.46	8.56	10
1978	2.43	0.56	+1.87				
				Jan 79	9.40	9.78	38

Table 10 **FHLMC's versus GNMA's: 1977-1978**

	Total Return			Yield Spread Relationship			
	All GNMAs	All FHLMCs	Advant. of FHLMCs	1st of Month	GNMA 8 Yield	FHLMC 8 Yield	Basis Point Spread
				Jan 77	7.59%	7.83%	24
1977	1.53%	2.93%	+1.40%				
				Jan 78	8.46	8.60	14
1978	2.19	3.97	+1.78				
				Jan 79	9.43	9.25	−18

Table 11 **Market Decline: First Quarter 1980**
FHLMC Current Coupon Outperformed Discount FHLMC's

	Total Return			Yield Spread Relationship			
	FHLMC 8½	FHLMC 12½	Advant. of 12½s	1st of Month	FHLMC 8½ Yield	FHLMC 12½ Yield	Basis Point Spread
				Jan 80	11.10%	12.31%	121
Jan-March 1980	−9.93%	−5.77%	+4.16%				
				Apr 80	13.19	13.85	66

Table 12 **Market Rally: Second Quarter 1980** Discounts Outperformed High Coupon Issues

	Total Return			Yield Spread Relationship			
	GNMA 9	GNMA 12½	Advant. of 9's	1st of Month	GNMA 9 Yield	GNMA 12½ Yield	Basis Point Spread
				Apr 80	13.40%	13.85%	45
April-June 1980	21.86%	16.12%	5.74%				
				Jul 80	10.76	11.88	112
	FHLMC 8½	FHLMC 12½	Advant. of 8½s	1st of Month	FHLMC 8½ Yield	FHLMC 12½ Yield	Basis Point Spread
				Apr 80	13.19%	13.85%	66
April-June 1980	21.76%	15.79%	5.97%				
				Jul 80	10.63	11.96	133

Mortgage Market Trends

Prepared by MBA's Economics Department

September 16, 1980

Thus far, 1980 has proved to be a rather difficult year for the U.S. economy, and particularly so for the housing and mortgage markets. Unfortunately, the economic problems that we have been experiencing in the recent past do not appear likely to abate significantly in the near future.

Despite the fact that the economy has taken some tentative steps on the road to recovery from the current recession, a great deal of uncertainty about the future course of the economy remains. The prospects for a sustained reduction in inflation are dim; the financial markets are experiencing a period of instability; unemployment is at a high level; and a number of sectors of the economy, most notably housing and the automotive industry, are clearly not out of the woods.

As we move into the final quarter of the year, the economy will probably be showing more positive signs of recovery, and interest rates should level off for a while. However, as the economy begins to pick up steam early in 1981, the underlying problems associated with inflation, which will not be solved in this relatively short recession, will only serve to place renewed upward pressure on interest rates.

What does this say for the housing and mortgage markets? The housing construction picture showed marked improvement in recent months. August witnessed the third straight month of increased housing construction, with housing starts advancing 12 percent over the previous month to a 1.399 million unit seasonally adjusted annual rate. Building permits, an indicator of future construction activity, also advanced in August, but at a much slower rate than has been experienced in recent months. August building permits increased only 7.76 percent, on a seasonally adjusted annual basis, as compared with the 15 percent increase recorded in July. This is probably an indication that housing construction activity is about to embark on a downward course again, reflecting the deleterious effects of the squeeze in the mortgage markets.

Sales activity of both new and existing housing picked up considerably during the summer months, thereby reducing the large inventory overhang that built up in the spring. It now appears, however, that house sales have slowed down considerably in the wake of renewed upward movement in mortgage interest rates.

Dr. Thomas R. Harter, Chief Economist

MORTGAGE MARKET TRENDS—OCTOBER 1980

RESIDENTIAL STRUCTURES, BY UNIT TYPE
(Units in thousands)

Year and Month	PERMITS 16,000 ISSUING PLACES						HOUSING STARTS					
	Actual			Seasonally Adjusted Annual Rate			Actual			Seasonally Adjusted Annual Rate		
	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units
1979												
APR	139	106	33	1,437	1,082	355	161	131	30	1,750	1,386	364
MAY	162	111	41	1,618	1,163	455	189	144	45	1,801	1,349	452
JUN	156	112	44	1,639	1,144	495	193	147	46	1,910	1,399	511
JUL	138	104	34	1,528	1,136	392	164	130	34	1,764	1,352	412
AUG	152	111	41	1,654	1,181	473	172	133	39	1,788	1,389	399
SEP	140	90	50	1,775	1,166	609	164	117	47	1,874	1,360	514
OCT	141	96	45	1,542	1,064	478	169	122	47	1,710	1,268	442
NOV	98	64	34	1,263	850	413	119	82	37	1,522	1,094	428
DEC	81	52	29	1,244	899	345	92	65	27	1,548	1,165	383
1980												
JAN	75	52	23	1,264	882	382	73	56	17	1,419	1,219	290
FEB	76	54	22	1,142	801	341	80	55	25	1,330	887	443
MAR	82	56	26	932	627	305	85	59	26	1,041	705	336
APR	77	54	23	789	536	253	96	71	25	1,030	728	302
MAY	77	56	21	825	576	249	92	73	19	913	714	199
JUN	101	69	32	1,078	721	357	116	84	32	1,223	832	391
JUL	113	84	29	1,236	900	336	119	94	25	1,249	951	298
6 months												
1980	488	341	147				542	398	144			
1979	763	555	208				868	670	198			
1978	850	623	227				987	766	221			
1977	823	621	202				949	766	183			

VALUE OF NEW CONSTRUCTION PUT IN PLACE
(Dollars in millions)

Year and Month	Seasonally Adjusted Annual Rate			
	Total	1 Unit	2+ Units	Non-Res
1979				
APR	121,155	59,897	16,943	44,315
MAY	122,818	59,915	16,915	45,988
JUN	125,955	60,617	17,802	47,536
JUL	127,697	61,059	17,916	48,722
AUG	127,149	61,381	17,915	47,853
SEP	128,898	61,308	19,055	48,535
OCT	130,677	60,858	19,005	50,814
NOV	130,358	59,218	19,749	51,391
DEC	132,078	57,753	20,751	53,574
1980				
JAN	137,295	58,439	22,224	56,632
FEB	130,053	54,463	20,664	54,926
MAR	120,768	48,797	19,628	52,343
APR	113,411	42,980	17,723	52,708
MAY	108,104	38,057	17,131	52,916
JUN	104,786	35,750	16,150	52,886
JUL	101,738p	37,210p	14,894p	49,634p

HOUSE SALES
(Units in thousands)

Year and Month	EXISTING HOUSES[1]	NEW HOUSES		
		Sold	Available For Sale	Months Supply at Current Rate
1979				
APR	333	72	417	5.7
MAY	371	69	426	6.2
JUN	344	64	420	6.6
JUL	343	66	421	6.3
AUG	377	69	419	6.1
SEP	314	62	414	6.7
OCT	329	55	416	7.6
NOV	255	41	409	10.0
DEC	197	34	403	11.8
1980				
JAN	209	43	393	9.2
FEB	220	44	381	8.7
MAR	243	43	370	8.6
APR	224	36	361	10.2
MAY	219	48	349	8.1
JUN	233	48	342	7.2
JUL	275	55p	338p	6.1p
6 months				
1980	1,348	257		
1979	1,902	387		
1978	1,956	437		
1977	1,750	442		

RESIDENTIAL STRUCTURES, BY REGION
(units in thousands)

Year and Month	PERMITS 16,000 ISSUING PLACES								STARTS							
	Actual				Seasonally Adjusted Annual Rate				Actual				Seasonally Adjusted Annual Rate			
	North East	North Central	South	West	North East	North Central	South	West	North East	North Central	South	West	North East	North Central	South	West
1979																
APR	14	31	51	43	142	297	543	455	15	34	65	47	171	356	692	531
MAY	18	37	60	48	181	328	616	493	18	50	72	51	173	396	734	498
JUN	18	34	59	45	199	332	636	472	19	24	79	51	178	371	862	499
JUL	15	27	51	45	161	281	585	501	18	26	68	43	174	356	762	472
AUG	15	30	50	47	147	310	664	533	20	39	74	40	176	388	770	454
SEP	19	29	54	39	217	337	704	517	13	39	67	46	164	392	765	553
OCT	14	28	59	38	151	271	673	447	21	35	73	40	172	317	765	456
NOV	13	16	42	27	152	191	557	363	19	20	53	27	170	249	716	387
DEC	10	12	34	25	144	224	517	359	10	15	40	27	156	326	667	399
1980																
JAN	5	8	39	23	116	221	577	350	6	6	40	22	194	213	673	339
FEB	5	8	39	24	125	178	524	315	3	8	47	23	73	223	701	333
MAR	10	10	40	22	122	120	442	248	7	12	45	21	105	178	511	247
APR	8	12	37	20	86	116	385	202	10	15	48	23	130	156	487	257
MAY	9	13	36	19	98	122	399	206	12	15	45	21	129	122	459	203
JUN	11	15	48	27	114	142	534	288	13	21	58	24	120	179	679	245
JUL	12	20	50	32	119	208	566	343	12	20	60	27	194	193	664	278
6 months																
1980	48	66	239	135					51	77	283	134				
1979	78	145	304	238					78	128	378	246				
1978	80	179	300	293					83	209	417	278				
1977	87	187	278	271					86	217	374	272				

CONSTRUCTION STATUS
(units in thousands)

Year and Month	UNDER CONSTRUCTION			COMPLETIONS		
	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units
1979						
APR	1,228	793	435	142	111	31
MAY	1,259	831	438	156	113	43
JUN	1,283	847	446	166	130	36
JUL	1,300	852	448	151	116	35
AUG	1,301	860	441	159	123	36
SEP	1,283	850	433	181	125	56
OCT	1,274	837	437	174	135	39
NOV	1,226	794	432	165	121	44
DEC	1,140	717	423	174	139	35
1980						
JAN	1,088	678	410	125	94	31
FEB	1,041	644	397	126	89	37
MAR	991	609	382	130	90	40
APR	953	588	365	135	93	42
MAY	918	570	348	120	87	33
JUN	900	566	334	131	89	42
JUL	895p	574p	321p	125p	82p	43p
6 months						
1980				767	542	225
1979				868	663	205
1978				824	659	165
1977				714	575	139

INTEREST RATES AND YIELDS

Year and Month	1-4 UNIT MORTGAGES					APARTMENTS[4]	CONSTRUCTION LOANS[5] ALL TYPES	FNMA		GNMA Current Securities Yield[7]	SELECTED SECURITIES				SPREADS (Basis Points)	
	FHA Opinion Survey			FHLBB Survey				FMS Auction Yields on 4 mo Commitments[6]			Aaa Utility New Issue	U.S. Gov't		Prime Commercial Paper 90-119 Days	FHA New Minus Aaa Utility	GNMA minus 10-yr Gov't.
	FHA New[3]	Conventional New	Conventional Existing	Conventional New	Conventional Existing			FHA/VA	Conv.			10-yr	26-wk			
1979																
APR	n.a.	10.55	10.55	10.34	10.54	10.125-10.375		10.645	11.035	9.86	9.70	9.18	9.490	9.85	n.a.	68
MAY	10.61	10.80	10.80	10.47	10.60	10.250-10.500	12.23	10.847	11.357	10.02	9.83	9.23	9.531	9.94	78	79
JUN	10.49	10.90	10.90	10.66	10.71	10.250-10.625		10.773	11.560	9.81	9.50	8.91	9.062	9.76	99	90
JUL	10.46	10.95	11.00	10.78	10.93	10.250-10.625		10.652	11.521	9.81	9.59	8.95	9.236	9.87	87	86
AUG	10.58	11.10	11.15	11.01	11.14	10.375-10.625	12.52	10.671	11.517	9.97	9.48	8.99	9.425	10.27	110	98
SEP	11.37	11.35	11.35	11.02	11.20	10.625-10.875		11.091	11.741	10.40	9.83	9.33	10.203	11.63	154	107
OCT	n.a.	12.15	12.20	11.18	11.30	11.250-11.500		12.497	12.865	11.30	10.97	10.30	11.660	13.23	n.a.	100
NOV	12.41	12.50	12.50	11.37	11.52	11.500-12.000	15.56	12.797	13.794	11.58	11.42	10.65	11.856	13.57	99	93
DEC	12.24	12.50	12.50	11.64	11.89	11.875-12.000		12.485	12.981	11.56	11.25	10.39	11.847	13.24	99	117
1980																
JAN	12.60	12.80	12.80	11.87	12.10	11.875-12.250		12.930	13.188	11.96	11.73	10.80	11.851	13.04	87	116
FEB	n.a.	14.10	14.10	11.93	12.62	13.000-14.000	15.77	14.589	14.124	13.02	13.57	12.41	12.721	13.78	n.a.	61
MAR	14.63	16.05	16.05	12.62	12.87	n.a.		15.581	16.665	13.69	14.00	12.75	15.100	16.81	63	94
APR	13.45	15.55	15.55	13.03	13.57	n.a.		14.670	16.451	13.17	12.90	11.47	13.618	15.78	55	170
MAY	11.99	13.20	13.20	13.67	14.12	13.000-15.000	18.32	12.855	13.535	11.54	11.53	10.18	9.149	9.49	46	136
JUN	11.85	12.45	12.45	12.69	13.31	12.250-12.750		12.360	12.946	10.89	10.96	9.78	7.218	8.27	89	111
JUL	12.39	12.45	12.45	12.48	12.61	12.500-13.500		12.699	12.807	11.53	11.60	10.25	8.101	8.41	79	128

LONG-TERM MORTGAGE LOANS CLOSED

(Dollars in Millions)

Year and Month	BY TYPE OF INSTITUTION					BY TYPE OF UNIT, AND INSTITUTION														
						1-4 Units					5+ Units					Nonresidential				
	Total	Mtg. Bankers	S&Ls	Banks[8]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[8]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[8]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[8]	Life Cos.
1979																				
FEB	13,558	3,045	5,290	4,308	843	9,936	2,387	4,669	2,880	86	893	225	337	180	151	2,572	434	284	1,248	606
MAR	16,075	2,989	7,036	4,900	1,150	12,207	2,498	6,203	3,421	85	1,041	234	417	285	105	2,827	257	416	1,194	960
APR	16,902	3,203	7,757	4,977	965	13,166	2,562	6,954	3,507	143	1,101	310	440	232	119	2,635	331	363	1,238	703
MAY	19,228	2,935	9,576	5,735	982	15,349	2,551	8,556	4,187	55	960	100	590	212	58	2,920	285	430	1,336	869
JUN	21,600	3,162	9,859	7,272	1,307	17,157	2,635	8,995	5,420	107	1,249	294	484	224	247	3,193	232	380	1,628	953
JUL	20,460	3,498	8,412	7,314	1,236	16,096	2,858	7,705	5,407	126	1,043	309	377	264	93	3,322	332	330	1,643	1,017
AUG	21,287	4,232	9,018	6,800	1,237	17,298	3,602	8,289	5,193	214	1,083	217	375	342	149	2,906	413	354	1,265	874
SEP	18,956	3,955	7,738	5,820	1,443	14,395	3,032	7,012	4,113	238	1,254	469	351	263	171	3,306	453	375	1,444	1,034
OCT	21,394	4,141	8,879	6,869	1,505	16,913	3,690	7,994	5,009	220	921	91	488	191	151	3,560	360	397	1,669	1,134
NOV	18,362	3,526	7,230	6,175	1,431	13,823	2,833	6,480	4,260	250	831	148	338	223	122	3,708	545	412	1,692	1,059
DEC	15,040	3,338	5,223	5,018	1,461	11,801	2,552	4,584	3,338	427	792	130	270	251	141	3,346	655	369	1,429	893
1980																				
JAN	12,134	2,588	4,070	4,073	1,403	8,731	2,271	3,589	2,703	168	588	82	208	204	94	2,816	236	273	1,166	1,141
FEB	11,975	2,733	4,281	3,802	1,159	8,469	2,055	3,805	2,361	248	919	454	204	148	113	2,587	224	272	1,293	798
MAR	14,187	2,632	5,487	4,509	1,559	10,372	2,085	4,955	2,899	433	517	72	224	135	86	3,298	475	308	1,475	1,040
APR	12,363	2,297	4,707	4,111	1,248	8,868	1,662	4,216	2,749	241	614	94	218	137	165	2,881	541	273	1,225	842
MAY	9,852	2,080	3,536	3,301	935	6,860	1,606	2,996	2,051	207	429	41	220	102	66	2,563	433	320	1,148	662
JUN	n.a.	2,757	n.a.	n.a.	n.a.	n.a.	1,975	n.a.	n.a.	n.a.	n.a.	415	n.a.	n.a.	n.a.	n.a.	366	n.a.	n.a.	n.a.

LONG-TERM COMMITMENT ACTIVITY

(Dollars in Millions)

Year and Month	OUTSTANDING					ISSUED DURING MONTH				
	Total	Mtg. Bankers	S&Ls	Banks[8]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[8]	Life Cos.
1979										
FEB	75,584	15,184	24,960	11,435	24,005	12,888	3,344	5,959	2,250	1,335
MAR	79,191	15,430	27,707	11,390	24,664	17,121	3,853	8,608	2,543	2,117
APR	79,095	12,675	29,054	12,054	25,312	18,058	3,433	9,428	3,287	1,910
MAY	84,252	14,123	30,140	13,016	26,973	20,870	3,803	10,387	3,776	2,904
JUN	84,305	13,676	29,350	13,155	28,124	18,739	3,163	9,003	3,857	2,716
JUL	86,870	16,501	28,818	12,817	28,734	20,028	3,547	8,167	3,266	5,048
AUG	85,014	14,153	28,379	13,195	29,287	19,816	5,466	8,852	3,335	2,163
SEP	85,090	14,619	28,373	11,974	30,124	16,809	4,073	7,730	2,530	2,476
OCT	83,042	14,258	27,084	11,493	30,207	16,943	4,014	7,992	2,916	2,021
NOV	79,324	14,824	23,714	11,315	29,471	12,023	3,415	4,741	2,407	1,460
DEC	73,350	13,473	21,467	10,504	27,906	8,533	2,608	3,248	1,892	785
1980										
JAN	67,753	11,983	20,502	8,929	26,339	8,579	2,984	3,510	1,545	540
FEB	68,818	12,333	21,351	9,717	25,417	9,400	2,046	5,017	1,637	700
MAR	66,122	11,974	20,424	9,215	24,509	9,924	2,372	4,782	1,850	920
APR	60,999	10,500	18,597	8,286	23,616	7,126	1,964	3,147	1,276	739
MAY	58,833	10,336	17,762	8,011	22,724	7,051	2,958	2,802	901	390
JUN	n.a.	12,840	n.a.	n.a.	n.a.	n.a.	2,840	n.a.	n.a.	n.a.

MORTGAGE INSURANCE

(Units in thousands, dollars in millions)

Year and Month	APPLICATIONS RECEIVED UNITS			INSURED					
	FHA/VA			Total		FHA (203)		VA		Private	
	Total	VA	Private	Units	Amt.	Units	Amt.	Units	Amt.	Units	Amt.
1979											
FEB	114	74	40	93	3,861	27	936	31	1,367	35	1,558
MAR	157	102	55	98	4,023	25	855	32	1,415	41	1,753
APR	169	106	63	90	3,741	19	665	24	1,075	47	[illegible]
MAY	185	116	69	102	4,246	23	806	24	1,082	55	2,[illegible]
JUN	166	103	63	103	4,338	24	846	24	1,096	55	2,[illegible]
JUL	170	112	58	117	4,996	29	1,058	31	1,423	57	2,515
AUG	177	118	59	116	5,042	25	912	35	1,695	56	2,435
SEP	150	100	50	104	4,646	20	744	39	1,910	45	1,992
OCT	155	98	57	104	4,580	29	1,092	22	1,100	53	2,388
NOV	116	76	40	102	4,393	27	1,004	29	1,391	46	2,098
DEC	79	50	29	91	4,117	20	769	31	1,531	40	1,817
1980											
JAN	90	66	24	100	4,534	31	1,142	39	1,956	30	1,436
FEB	91	63	28	71	3,153	21	753	26	1,301	24	1,099
MAR	101	61	40	74	3,371	18	696	27	1,329	29	1,346
APR	90	58	32	76	3,473	20	746	23	1,149	33	1,578
MAY	101	76	25	56	2,608	13	483	17	848	26	1,277
JUN	105	78	27	50	2,273	13	502	16	741	22	1,030

SECONDARY MARKET ACTIVITY

(Dollars in Millions)

Year and Month	FNMA					FHLMC			GNMA	
	4-Month Commitments				12 Month Convert Standby	Comm.	Purc.	Sold	Pass-Through Securities	
	FHA/VA		Conventional							
	Bid	Accept	Bid	Accept					Applications	Issued
1979										
APR	1,323	638	662	364	517	492	358	363	5,907	1,488
MAY	426	185	459	214	503	601	560	572	3,009	1,673
JUN	220	100	358	195	277	462	447	182	3,621	1,860
JUL	133	70	94	70	160	517	518	320	6,211	2,032
AUG	162	83	246	184	184	581	636	354	5,105	2,933
SEP	1,421	600	527	326	343	437	537	347	4,012	2,640
OCT	2,943	1,130	1,050	431	828	504	552	531	6,509	2,639
NOV	558	265	366	190	0	221	458	186	7,410	3,250
DEC	649	249	413	152	0	199	403	211	3,539	1,894
1980										
JAN	516	232	443	247	26	296	279	180	4,265	2,611
FEB	1,169	564	412	148	225	197	248	207	2,178	1,354
MAR	1,267	426	919	240	242	186	193	106	5,124	4,125
APR	494	199	135	66	85	189	231	200	4,509	1,778
MAY	609	214	280	109	62	491	176	391	5,281	1,127
JUN	603	267	170	76	92	577	225	230	6,627	1,320
JUL	1,255	506	229	141	72	702	440	288	n.a.	n.a.

MORTGAGE BANKERS CONSTRUCTION AND LAND LOAN ACTIVITY

(Dollars in Millions)

Year and Month	DISBURSEMENTS DURING MONTH					OUTSTANDING COMMITMENTS TO BORROWERS			
	Construction				Land Loans				
	Total	1-4 Units	5+ Units	Non-res.		Total	1-4 Units	5+ Units	Non-res.
APR	205	115	40	51	49	3,626	1,227	978	1,421
MAY	201	121	34	46	57	3,620	1,390	805	1,425
JUN	242	154	38	50	50	3,907	1,542	1,030	1,335
JUL	242	127	49	65	56	3,721	1,305	950	1,466
AUG	277	128	57	92	74	4,048	1,562	1,335	1,151
SEP	285	119	40	127	137	3,764	1,617	860	1,287
OCT	302	118	41	143	41	4,153	1,261	1,559	1,333
NOV	216	84	49	84	36	4,815	1,229	2,015	1,571
DEC	249	92	44	113	35	3,552	1,082	981	1,489
1980									
JAN	231	84	42	105	27	3,554	1,396	1,079	1,279
FEB	207	80	49	78	31	4,512	1,160	1,652	1,700
MAR	259	91	46	121	24	4,272	1,201	1,585	1,486
APR	191	71	40	81	59	3,484	1,104	1,042	1,338
MAY	209	88	47	74	72	4,254	965	1,789	1,500
JUN	243	89	47	107	55	4,209	1,016	1,604	1,589
JUL	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a.-Not available; p-Preliminary

[1]From the National Association of Realtors' "Existing Home Sales" series.

[2]Reflects cumulative total through the latest month for each column.

[3]Secondary market gross yields.

[4]Benchmark rates, Citicorp Real Estate, Inc.

[5]Federal Reserve's weighted average interest rate for Commercial Banks.

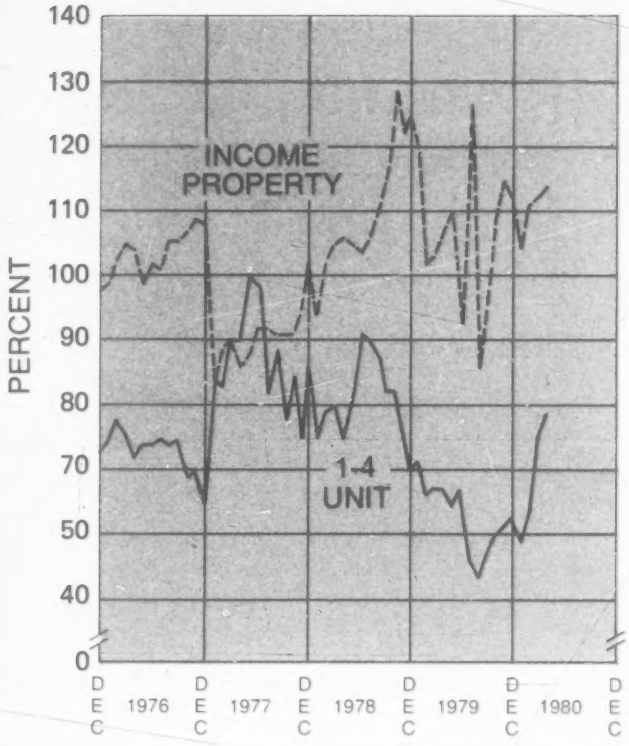
[6]Weighted average gross yields for accepted bids.

[7]Survey of three New York security dealers. Securities for immediate delivery.

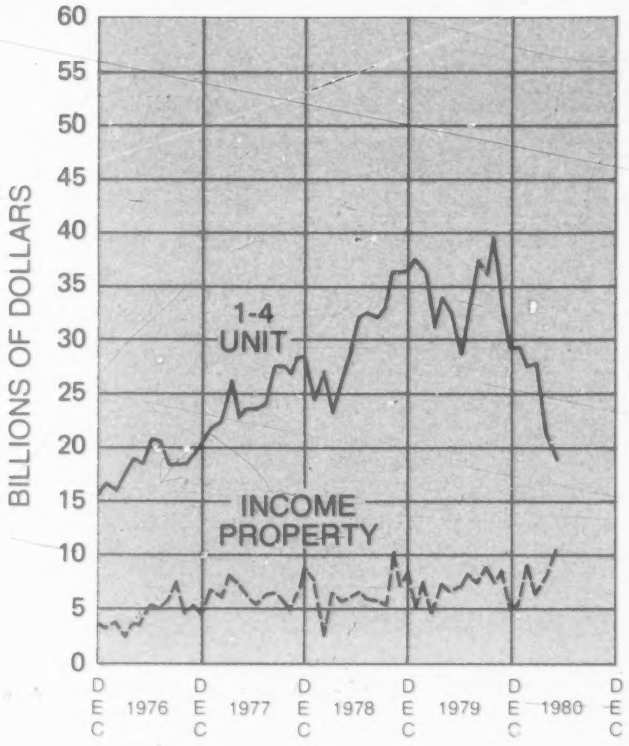
[8]Mutual Savings Banks and Commercial Banks.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, Bureau of the Census, Citicorp Real Estate, Inc., Department of Housing and Urban Development, Federal Home Loan Bank Board, Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, Government National Mortgage Association, Mortgage Bankers Association of America, National Association of Mutual Savings Banks, National Association of Realtors, Veterans Administration.

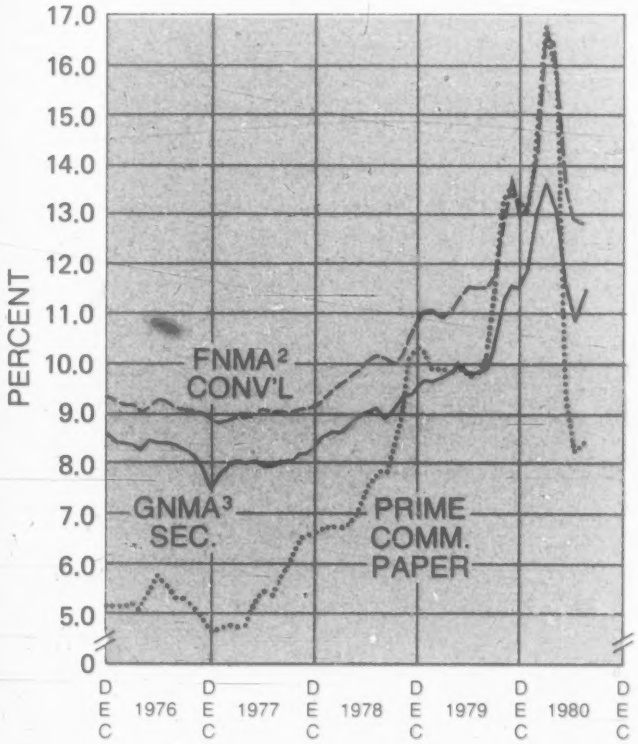
MORTGAGE BANKERS' LONG-TERM MORTGAGE COVERAGE[1]



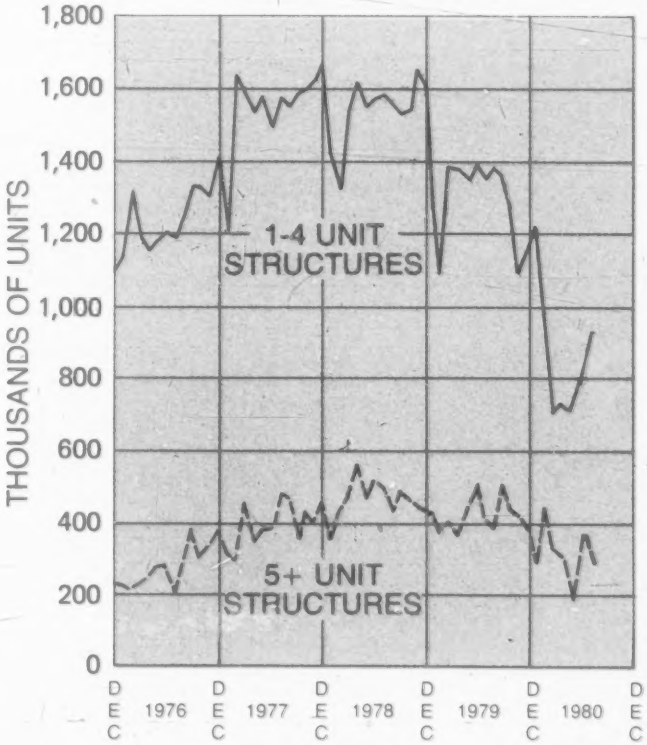
MORTGAGE BANKERS' LONG-TERM MORTGAGE LOANS CLOSED[4]



SELECTED YIELDS



HOUSING STARTS[4]



FOOTNOTES

1. OUTSTANDING LONG-TERM COMMITMENTS RECEIVED FROM INVESTORS DIVIDED BY THE SUM OF OUTSTANDING END OF MONTH INVENTORY AND OUTSTANDING LONG-TERM COMMITMENTS ISSUED TO BORROWERS, MULTIPLIED BY 100.
2. WEIGHTED AVERAGE GROSS YIELDS FOR ACCEPTED BIDS OF ALL FNMA FREE MARKET AUCTIONS DURING THAT MONTH.
3. SURVEY OF THREE NEW YORK SECURITY DEALERS. SECURITIES FOR IMMEDIATE DELIVERY.
4. SEASONALLY ADJUSTED ANNUAL RATES.

SOURCES: BUREAU OF THE CENSUS, FEDERAL NATIONAL MORTGAGE ASSOCIATION, FEDERAL RESERVE BOARD, MORTGAGE BANKERS ASSOCIATION.

MBA—ECONOMICS DEPARTMENT